

JC945
07/90/01
U.S. PTO

07-09-01

PTO/SB/05 (11-00)

Approved for use through 10/31/2002. OMB 0651-0032

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. TI-32591

First Inventor Lior Ophir

Title System and Method of Data Communication Using Turbo Trellis Coded Modulation or Turbo Trellis Coded Modulation in Combination With Constellation Shaping With or Without Precoding When Using Concatenated Coding Schemes or When Working in a Non-Error Free Operation Point

Express Mail Label No. EL071334378US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents

| | | | |
|---|--|-------------------------------------|--|
| 1. | <input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17) (Submit an original, and a duplicate for fee processing) | 7. | <input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) |
| 2. | Applicant claims small entity status. See 37 CFR 1.27 | 8. | Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary) |
| 3. | <input checked="" type="checkbox"/> Specification (preferred arrangement set forth below) | [Total Pages] | a. <input type="checkbox"/> Computer Readable Form (CRF) |
| | - Descriptive title of the Invention - Cross Reference to Related Applications - Statement Regarding Fed sponsored R & D - Reference to sequence listing, a table, or a computer program listing appendix - Background of the Invention - Brief Summary of the Invention - Brief Description of the Drawings (if filed) - Detailed Description - Claim(s) - Abstract of the Disclosure | [21] | b. Specification Sequence Listing on: i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or ii. <input type="checkbox"/> paper |
| 4. | <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) | [Total Sheets] | c. <input type="checkbox"/> Statements verifying identity of above copies |
| 5. | Oath or Declaration | [Total Pages] | |
| a. | <input type="checkbox"/> Newly Executed (original or copy) | 9. | <input type="checkbox"/> Assignment Papers (cover sheet & documents(s)) |
| b. | <input type="checkbox"/> Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 18 completed) | 10. | <input type="checkbox"/> 37 CFR 3.73(b) Statement (when there is an assignee) <input type="checkbox"/> Power of Attorney |
| i. | <input type="checkbox"/> DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b). | 11. | <input type="checkbox"/> English Translation Document (if applicable) |
| 6. | <input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76 | 12. | <input type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input type="checkbox"/> Copies of IDS Citations |
| 18. | If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76: | | |
| <input type="checkbox"/> Continuation | | <input type="checkbox"/> Divisional | <input type="checkbox"/> Continuation-in-part (CIP) |
| Prior application information | | Examiner _____ | |
| of prior application No. _____ / _____ Group / Art Unit: _____ | | | |

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS Customer Number or Bar Code Label

23494
(Insert Customer No. or Attach bar code label here)

or Correspondence address below

| | | | |
|-------------------|--------------------------------|----------------|---|
| NAME | Texas Instruments Incorporated | | |
| ADDRESS | | | |
| CITY | STATE | TX | ZIP CODE |
| COUNTRY | TELEPHONE | (972) 917-5285 | FAX (972) 917-4418 |
| Name (Print/Type) | Dwight N. Holmbo | | Registration No. (Attorney/Agent) Reg. No. 36,410 |
| Signature | Dwight N. Holmbo | | Date 7-6-01 |

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

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FEE TRANSMITTAL

Patent fees are subject to annual revision on October 1.

These are the fees effective October 1, 1997

Small Entity payments must be supported by a small entity statement, otherwise large entity fees must be paid. See Forms PTO/SB/09-12.

TOTAL AMOUNT OF PAYMENT

(\$ 710.00)

Complete If Known

| | |
|----------------------|------------------|
| Application Number | To Be Determined |
| Filing Date | 7/06/01 |
| First Named Inventor | Lior Ophir |
| Examiner Name | To Be Determined |
| Group / Art Unit | To Be Determined |
| Attorney Docket No. | TI-32591 |

METHOD OF PAYMENT

1. The Commissioner is hereby authorized to charge to the following Deposit Account,

Deposit Account Number 20-0668

Deposit Account Name Texas Instruments Incorporated

Charge any additional fee required or credit any overpayment Charge all indicated fees and any additional fee required or credit any overpayment

2. Payment Enclosed:

Check Money Order Other

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

| Large Fee Code | Entity Fee (\$) | Small Fee Code | Entity Fee (\$) | Fee Description | Fee Paid |
|----------------|-----------------|----------------|-----------------|---|----------|
| 105 | 130 | 205 | 65 | Surcharge - late filing fee | |
| 127 | 50 | 227 | 25 | Surcharge - late provisional filing fee or cover sheet | |
| 139 | 130 | 139 | 130 | Non-English specification | |
| 147 | 2,520 | 147 | 2,520 | For filing a request for reexamination | |
| 112 | 920* | 112 | 920* | Requesting publication of SIR prior to Examiner action | |
| 113 | 1,840* | 113 | 1,840* | Requesting publication of SIR after Examiner action | |
| 115 | 110 | 215 | 55 | Extension for reply within first month | |
| 116 | 400 | 216 | 200 | Extension of time within second month | |
| 117 | 950 | 217 | 475 | Extension of time within third month | |
| 118 | 1,510 | 218 | 755 | Extension of time within fourth month | |
| 128 | 2,060 | 228 | 1,030 | Extension of time within fifth month | |
| 119 | 310 | 219 | 155 | Notice of Appeal | |
| 120 | 310 | 220 | 155 | Filing a brief in support of an appeal | |
| 121 | 270 | 221 | 135 | Request for oral hearing | |
| 138 | 1,510 | 138 | 1,510 | Petition to institute a public use proceeding | |
| 140 | 110 | 240 | 55 | Petition to revive - unavoidable | |
| 141 | 1,320 | 241 | 660 | Petition to revive - unintentional | |
| 142 | 1,320 | 242 | 660 | Utility issue fee (or reissue) | |
| 143 | 450 | 243 | 225 | Design issue fee | |
| 144 | 670 | 244 | 335 | Plant issue fee | |
| 122 | 130 | 122 | 130 | Petitions to the Commissioner | |
| 123 | 50 | 123 | 50 | Petitions related to provisional applications | |
| 126 | 240 | 126 | 240 | Submission of Information Disclosure Stmt | |
| 581 | 40 | 581 | 40 | Recording each patent assignment per property (time number of properties) | |
| 146 | 790 | 246 | 395 | Filing a submission after final rejection (37 CFR 1.129(a)) | |
| 149 | 790 | 249 | 395 | For each additional invention to be examined (37 CFR 1.129(b)) | |

FEE CALCULATION**1. BASIC FILING FEE**

| Large Fee Code | Entity Fee (\$) | Small Fee Code | Entity Fee (\$) | Fee Description | Fee Paid |
|----------------|-----------------|----------------|-----------------|------------------------|----------|
| 101 | 710 | 201 | 355 | Utility filing fee | \$710 |
| 106 | 320 | 206 | 160 | Design filing fee | \$ |
| 107 | 490 | 207 | 245 | Plant filing fee | \$ |
| 108 | 710 | 208 | 355 | Reissue filing fee | \$ |
| 114 | 150 | 214 | 75 | Provisional filing fee | \$ |
| SUBTOTAL (1) | | | | (\$710.00) | |

2. EXTRA CLAIM FEES

| | Extra Claims | Fee from below | Fee Paid |
|--------------------|--------------|--------------------|----------|
| Total Claims | 18 | -20** = 0 x 18 = 0 | = 0 |
| Independent Claims | 2 | -3** = 0 x 80 = 0 | = 0 |
| Multiple Dependent | | | 270 = 0 |

**or number previously paid, if greater; For Reissue, see below

| Large Fee Code | Entity Fee (\$) | Small Fee Code | Entity Fee (\$) | Fee Description |
|----------------|-----------------|----------------|-----------------|---|
| 103 | 18 | 203 | 9 | Claims in excess of 20 |
| 102 | 80 | 202 | 40 | Independent Claims in excess of 3 |
| 104 | 270 | 204 | 135 | Multiple dependent claims in excess of 3 |
| 109 | 80 | 209 | 40 | **Reissue independent claims over original patent |
| 110 | 18 | 210 | 9 | **Reissue claims in excess of 20 and over original patent |
| SUBTOTAL (2) | | | | (\$0) |

Other fee (specify) _____

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) _____

| SUBMITTED BY | | Complete (if applicable) | | |
|-----------------------|-----------|--------------------------|--------|-----------------------------|
| Typed or Printed Name | Signature | Dwight N. Holmbo | Date | Reg. Number |
| | | | 7/6/01 | 36,410 |
| | | | | Deposit Account User ID N/A |